

Date: Friday, 5/25/2007 8:36:45 AM  
User: Kim Johnston

Process Sheet

POSITIVE RECALL

Customer : CU-DAR001 Dart Helicopters Services  
Job Number : 32646  
Estimate Number : 12883  
P.O. Number : N/A  
This Issue : 5/25/2007 S.O. No. : N/A  
Prsht Rev. : NC  
First Issue : N/A Type : SMALL /MED FAB  
Previous Run : N/A  
Written By :  
Checked & Approved By : 07.05.25  
Comment : Est Rev:A New Issue 07.05.24 EC

Drawing Name : ARM  
Part Number : D3560043  
Drawing Number : D3560 REV.B  
Project Number : N/A  
Drawing Revision : B  
Material : N/A  
Due Date : 6/5/2007

EFFECTIVE 07.06.05 AUTH JP  
RELEASED 07.06.06 DATE JP

Qty: 30 Um: Each

Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 M6061T6B0500X05000 6061-T6 Bar .50" x 5.0"



Comment: Qty.: 1.3598 f(s)/Unit Total : 40.7925 f(s) x 20  
6061-T6 Bar 0.50" x 5.00"  
Batch: 17625 x 30 x 5 MD4598 X 7

BC 07.06.01

20

2.0 BAND SAW BAND SAW



Comment: BAND SAW  
Cut blanks 15.500" long

BC 07.06.01

20

3.0 HAAS1 HAAS CNC VERTICAL MACHINING #1



Comment: HAAS CNC VERTICAL MACHINING #1

1- Mill as per Folio FA695 Rev: AA & Dwg D3560 Rev: B

2-C'sink 0.196" hole on manual mill as per dwg D3560

3-Deburr per dwg D3560

J.L. / BC 07.06.01

20

4.0 QC2 INSPECT PARTS AS THEY COME OFF MACHINE



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

J.L. / BC 07.06.01

20

5.0 QC8 SECOND CHECK




Comment: SECOND CHECK

07/06/10

20



W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	
07.06.06	4	NO POWDER COAT. CHEM CONV. COAT ONLY.  REF ATTACHED DS EMAIL				 07.06.06 pr Q51042		
07.06.27	7	PRESS FIT GUY 1 D2808 Bushing Bth <u>28600/32752/32896</u>			6			

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes ☒ No ☐ DQA: ☒ Date: 07/07/03  
 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
07.06.08	3	3 Parts scrap. Program Error. $\phi$ .900 Bore Drilled to 1.000" on 2 parts. $\phi$ .507 hole bored to 1.515.	<i>[Signature]</i> Q51042	Programs have been edited + updated on network. Destroy and replace	<i>[Signature]</i> 07.06.08	<i>[Signature]</i> 07.06.11	<i>[Signature]</i> Q51042	<i>[Signature]</i> 07.06.11

NOTE: Date & initial all entries



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## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: ARM

Job Number: 32646

Part Number: D3560043

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

D35921

PLATE



Comment: Qty.: 1.0000 Each(s)/Unit Total: 30.0000 Each(s)

PLATE

*332661*

*RE. 07-06-26* *6*

7.0

LARGE FAB 1

LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

1-Weld assembly as per dwg D3560

*Weld Rod 3104721*

*RE 07-06-27* *6*

8.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

*John-28* *(6)*

9.0

QC9

VISUAL WELDING INSPECTION



Comment: VISUAL WELDING INSPECTION

*PD 07-06-28* *(6)*

10.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

*9.m 07-06-28*

*FF 07-06-12* *6* *+*

11.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3

*NO POWDER COAT*

*SEE WLD CHANGE  
SEE ATTACHED E-mail.*



12.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

*RE 07-07-03* *6*

13.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: *WA*

*RE 07-07-03* *6*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes ☒ No ☐ DQA: D Date: 9/07/03  
 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



Date: Friday, 5/25/2007 8:36:45 AM

User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: ARM

Job Number: 32646

Part Number: D3560043

Job Number:



Seq. #:

Machine Or Operation:

Description :

14.0

QC21

FINAL INSPECTION/W/O RELEASE



*Handwritten signature and circled '6'*

Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



*Handwritten: 12/07/03  
u 07/07/03*

POSITIVE RECALL

EFFECTIVE \_\_\_\_\_ AUTH \_\_\_\_\_

RELEASED 16 DATE 07/07/03

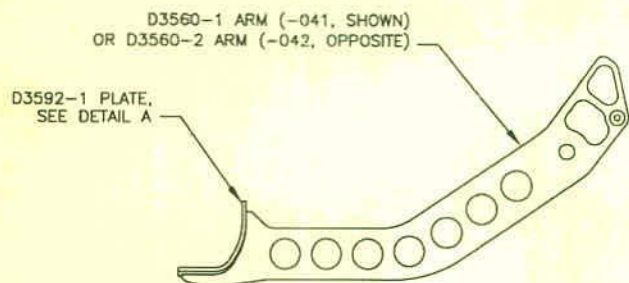
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

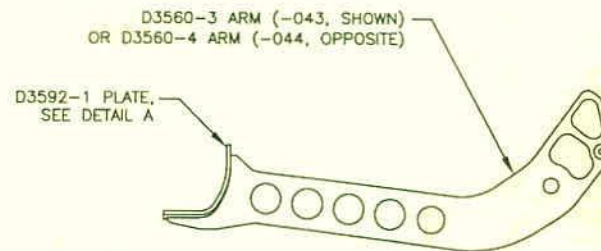
QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

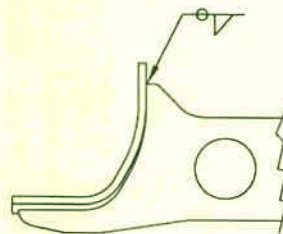
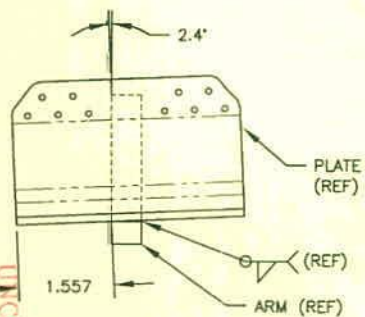
**NOTE:** Date & initial all entries



D3560-041 ARM WELDMENT (SHOWN),  
D3560-042 ARM WELDMENT (OPPOSITE)



D3560-043 ARM WELDMENT (SHOWN),  
D3560-044 ARM WELDMENT (OPPOSITE)



DETAIL A  
(SCALE 1:1)

GENERAL NOTES

- 1) WELD PER QSI 004
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
POWDER COAT WHITE (4.3.5.1) PER DART QSI 004 4.3
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES

RELEASED

07.05.07

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B	07.01.15	REDESIGN AS WELDMENT, ADD POCKETS
A	06.09.25	NEW ISSUE
DESIGN	q	DRAWN BY q
CHECKED	#	APPROVED #
DATE	07.01.15	TITLE
		ARM WELDMENT
		REV. B
		SHEET 1 OF 3
		SCALE 1:4

**DART**

DART AEROSPACE LTD.  
WARRICKBURT, ONTARIO, CANADA

DRAWING NO.

D3560

ARM WELDMENT

REV. B

SHEET 1 OF 3

SCALE

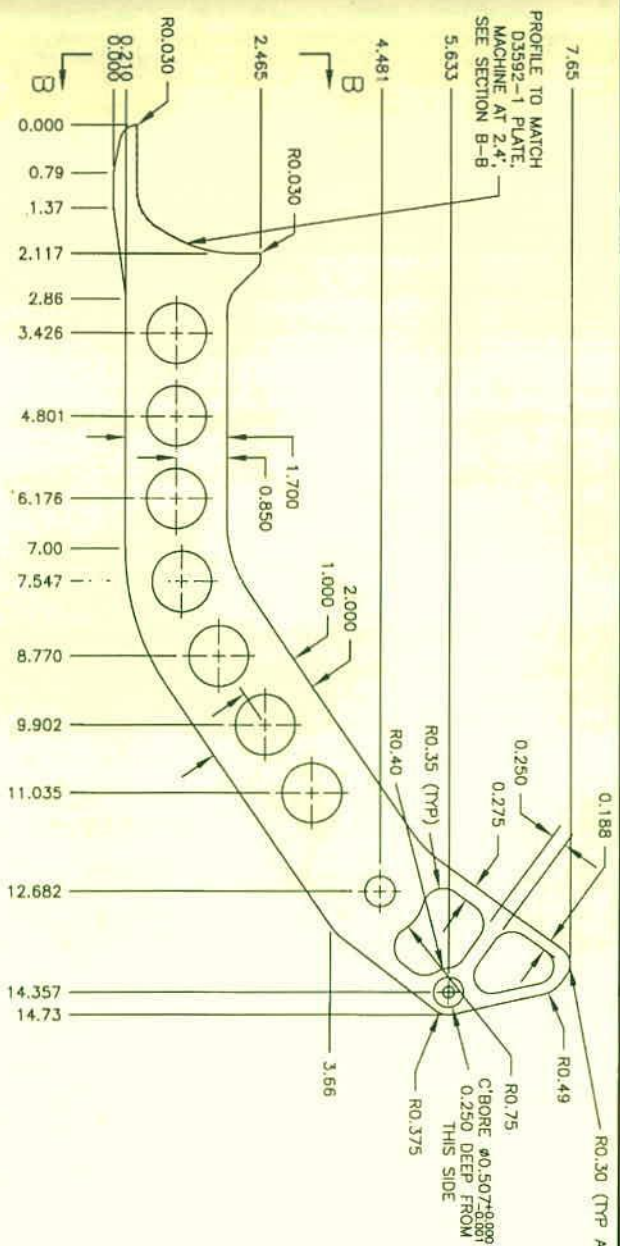
1:4

NO. 32646  
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SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
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ENGINEERING  
RETURN TO  
SHOP COPY



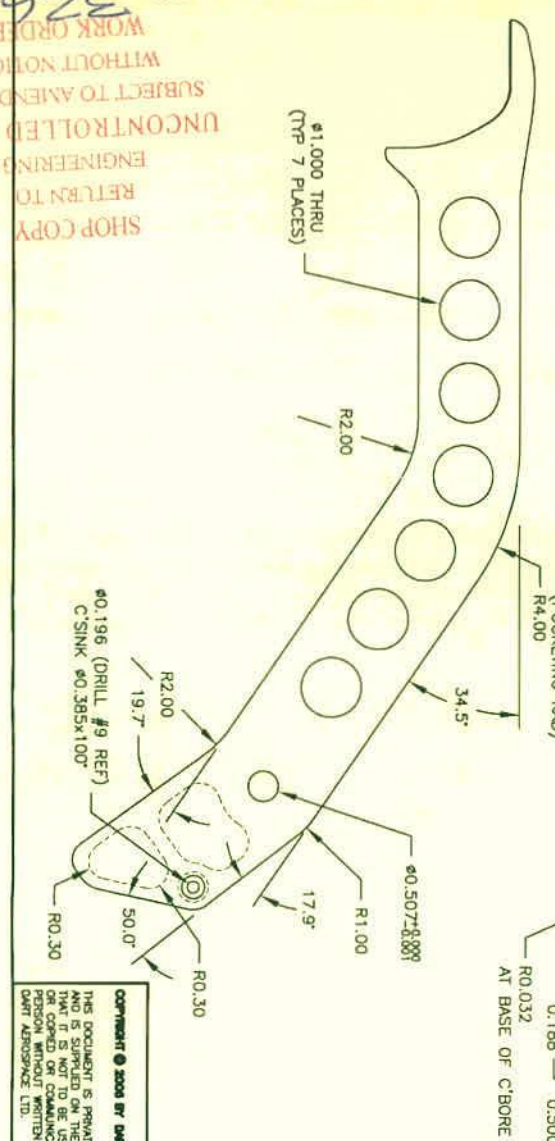
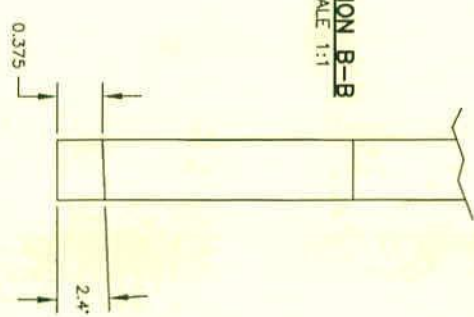






- D3560-1 ARM (SHOWN), D3560-2 ARM (OPPOSITE)**
- 1) MATERIAL: 6061-T6 ALUMINUM, 0.500 THICK (QQ-A-200/8 OR QQ-A-250/11, REF DART SPEC. M6061T6B0.500)
  - 2) FINISH: NONE
  - 3) TOLERANCES ARE PER DART OSI 018 UNLESS OTHERWISE NOTED
  - 4) ALL DIMENSIONS ARE IN INCHES
  - 5) BREAK ALL SHARP CORNERS 0.005 TO 0.015

**SECTION B-B**  
SCALE 1:1



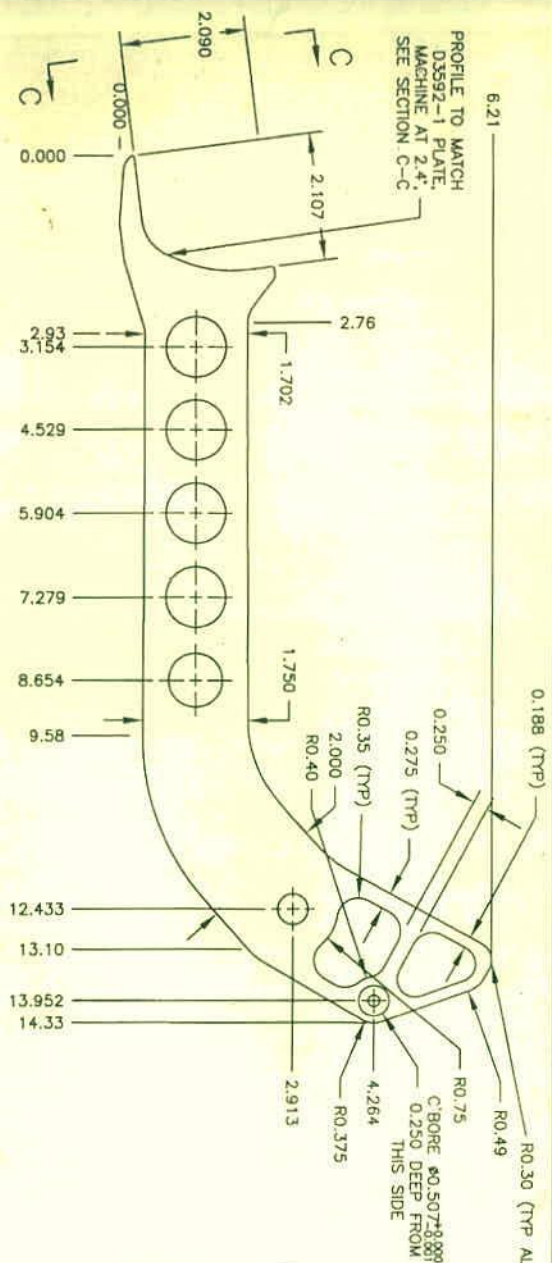
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		DATE	07.01.15			TITLE	ARM WELDMENT
						REV. B	SHEET 2 OF 3
						SCALE	1:2

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ENGINEERING



**D3560-3 ARM (SHOWN). D3560-4 ARM (OPPOSITE)**

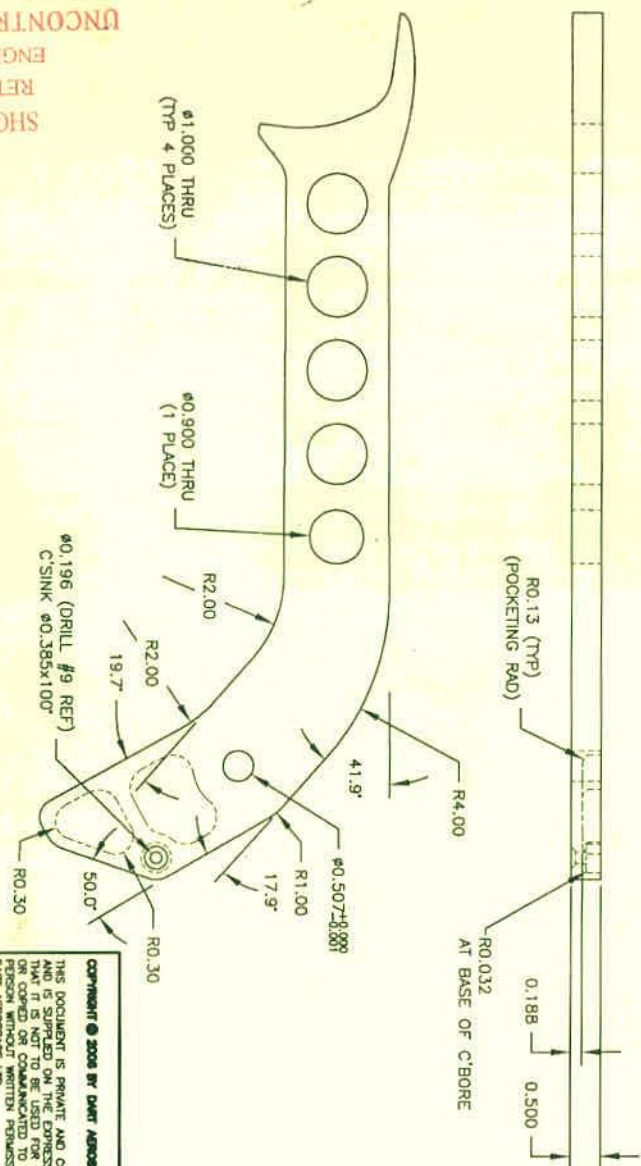
1) MATERIAL: 6061-T6 ALUMINUM, 0.500 THICK  
(Q-Q-A-200/8 OR Q-Q-A-250/11, REF DART SPEC.  
M6061T6B0.500)

2) FINISH: NONE

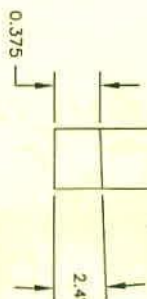
3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

4) ALL DIMENSIONS ARE IN INCHES

5) BREAK ALL SHARP CORNERS 0.005 TO 0.015



**SECTION C-C**  
NEW ROTATED  
SCALE 1:1



RELEASE

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DESIGN	CHAMIN BY	 <b>DART</b> DART AEROSPACE LTD. MISSISSAUGA, ONTARIO, CANADA
CHECKED	APPROVED	
DATE	DRAWING NO.	
	TITLE	
07.01.15		REV. B SHEET 3 OF 3 SOME
ARM WELDMENT		





DART AEROSPACE LTD		Work Order: 32646
Description: ARM		Part Number: 03560-3
Inspection Dwg: 03560 Rev: B		Page 1 of 1

### FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
13.952	±.010	13.948	✓			
12.433	"	12.435	✓			
2.913	"	2.912	✓			
4.264	"	4.265	✓			
1.702	"	1.702	✓			
.250	"	.250	✓			
.188	"	.188	✓			
.275	"	.275	✓			
2.000	"	2.000	✓			
1.750	"	1.750	✓			
.188	"	.193	✓			
.500	"	.500	✓			
12.13	±.03	.170	✓			
φ1.000	±.010	1.000	✓			
φ.900	±.010	.900	✓			
φ.196	±.005 -.001	.200	✓			
φ.507	±.000 -.001	.5065	✓			
φ.507	"	.5065	✓			
.385 X 100°	±.010	.375	✓			
.375	"	.375	✓			

Measured by: BG	Audited by: gnd	Prototype Approval:
Date: 07-06-01	Date: 07/06/01	Date:

Rev	Date	Change	Revised by	Approved
A		New Issue	KJ/JLM	





**Chris Provencal**

---

**From:** David Shepherd [dshepherd@dartaero.com]  
**Sent:** June 5, 2007 5:18 PM  
**To:** 'Chris Provencal'  
**Subject:** RE: D3562-041/-042

As we have discussed previously, this is acceptable as long as the Magnabond doesn't break down.

David

---

**From:** Chris Provencal [mailto:cprovencal@dartaero.com]  
**Sent:** Tuesday, June 05, 2007 11:00 AM  
**To:** David Shepherd (David Shepherd)  
**Subject:** D3562-041/-042

David,

For the D3562-041/-042 step weldment, as discussed. They want to switch from Sikaflex to Magnabond, and powder coat after final assembly.

As part of this change, the D3560-XX arms won't be powder coated, and the D2808 Bushing won't be assembled until after final assembly of the step weldment.

Since this is the first time trying this, we will ensure that the steps are checked after powdercoating in case the Magnabond doesn't do anything unexpected (eg. bubbling). If we see anything suspect, we will assemble them the old way.

Is this acceptable.

-Chris

No virus found in this incoming message.  
Checked by AVG Free Edition.  
Version: 7.5.472 / Virus Database: 269.8.9/834 - Release Date: 6/5/2007 2:38 PM

No virus found in this outgoing message.  
Checked by AVG Free Edition.  
Version: 7.5.472 / Virus Database: 269.8.9/834 - Release Date: 6/5/2007 2:38 PM

D3562-041